

Claims**Vibration monitor for machine elements**

1. A measuring system (1) for picking up structure-borne sound from machine elements in machine housings, the measuring system (1) being fixed to the machine housing (15) via the lubrication hole opening (16) and comprising the elements

- a mounting pin (2) with a passage hole (3)
- a housing (5, 5a) to accommodate the printed circuit board
- at least one printed circuit board (9) having electronic components for signal evaluation
- at least one vibration sensor (7a),

characterized in that the vibration sensor housing (7) having the vibration sensor (7a) is arranged such that it can be rotated with respect to the mounting pin (2) as the mounting pin (6) is screwed into the lubrication hole opening (16), and in that, in the end position of the screwing-in of the mounting pin (2), the vibration sensor housing (7) is connected to the machine housing (15) via the metal bushing (6) with a force fit and so as to be secured against rotation and the vibration sensor (7a) rests on the metal bushing (6), and thus the structure-borne sound is transmitted directly from the machine housing (15) to the vibration sensor (7a)

via the metal bushing (6).

2. The measuring system as claimed in claim 1, characterized in that the temperature of the machine housing is registered via a temperature sensor (10).

3. The measuring system as claimed in claim 1, characterized in that the metal bushing (6) is connected to the lower half (5) of the housing so as to be secure against rotation.

4. The measuring system as claimed in claim 3, characterized in that, as the mounting pin (6) is screwed into the lubrication hole opening (16), the housing (5, 5a) is arranged such that it can be rotated with respect to the mounting pin (2), and in that, in the end position of the screwing-in of the mounting pin (2), the housing (5, 5a) is connected to the machine housing (15) via the metal bushing (6) with a force fit and so as to be secured against rotation.

5. The measuring system as claimed in claim 1, characterized in that damping elements (13, 13a) (e.g. O-rings) are arranged between the printed circuit board (9) and the mounting pin (2).

6. The measuring system as claimed in claim 1, characterized in that the machine condition is indicated by at least one light-emitting diode (14), which is arranged on the printed circuit board (9).